



PARIS 2022

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GROUP REF. : B2
PREF. SUBJECT : PS1
QUESTION N° : 1.8

Hello,

I'd like to discuss question 1.8 from the Overhead Lines SC BC Special Report. The question reads 'B2-10155 highlights different constraints faced in relocation of one of the existing lines. Whether similar constraints are faced in other 4 such lines where the work is reported taken up?' The short answer is 'Yes'. Each line had unique challenges that required unique engineering and construction solutions. Some of the challenges were known upfront and others were unforeseen.

An example of one line with known constraints is one that had 10,000' of existing line crossing a national conservation with poles leaning in excess of 30 degrees. The only viable option to storm harden this section was to relocate it out of the current location. The pole line was double circuit. To avoid relocating 2 circuits, 1 was removed and load distributed amongst other nearby lines. The other circuit (the target circuit) was relocated along a state owned road. This relocation added nearly 10,000' to the circuits length and required more than 20 new land rights to install.

An example of an unforeseen constraint was on a line that was crossing a rail road overpass. The pole line had three circuits which were recently converted to hendrix cable. At the time of the conversion, engineering determined that a dedicated neutral wire was not required and that the messenger wire for each circuit could be bonded together to act as the system neutral. This posed a significant issue as the line needed to be converted to 150kV BIL for the advanced auto reclosers that were being installed on the project. After discussion with the rail road, it was found that the lower circuit was at the minimum vertical clearance from the rail road tracks. Since the rail road was an overpass, the maximum height poles were currently being used. This required the engineering team to develop an underground route for one of the circuits to allow for a system neutral to be installed which required 800' concrete encased concrete under the overpass.

Additionally, with the large size of these projects and the time taken for engineering, several conflicting projects came up as well. Some related to public road work such as road widenings. Other conflicting projects were related to new DER interconnect projects and other related to new large customers (load greater than 1MW). These challenges highlight how difficult it is to truly storm harden existing electrical infrastructure. Collaboration amongst private and public utilities, the public, and government is required to support the continued efforts to harden our infrastructures.

Thank you,

